

## **Section 307—Impermeable Membrane for Subgrades, Basins, Ditches, and Canals**

### **307.1 General Description**

This work includes installing materials to serve as an impermeable membrane. The membrane prevents water seepage beneath the installation level shown on the Plans.

#### **307.1.01 Definitions**

General Provisions 101 through 150.

#### **307.1.02 Related References**

##### **A. Standard Specifications**

Section 888—Waterproofing Membrane Material

##### **B. Referenced Documents**

General Provisions 101 through 150.

#### **307.1.03 Submittals**

General Provisions 101 through 150.

### **307.2 Materials**

Use the following materials to construct the waterproofing layer (impermeable membrane):

- Cross-laminated, high-density polyethylene film
- Flexible, self-adhesive, rubberized asphalt

Ensure that these materials meet the requirements of Subsection 888.2.03. As an alternative and if approved by the Engineer, use another equal system that has at least a 5-year serviceability record.

#### **307.2.01 Delivery, Storage, and Handling**

General Provisions 101 through 150.

### **307.3 Construction Requirements**

#### **307.3.01 Personnel**

General Provisions 101 through 150.

#### **307.3.02 Equipment**

General Provisions 101 through 150.

#### **307.3.03 Preparation**

General Provisions 101 through 150.

#### **307.3.04 Fabrication**

General Provisions 101 through 150.

#### **307.3.05 Construction**

##### **A. Installation**

Install according to the Plans.

##### **B. Placement**

Place the membrane on a soil blanket or cushion at least 6 in (150 mm) thick, that contains material fine enough to pass through a No. 10 (2 mm) sieve. Take care not to form a “slip plane” between the underlying soil and overlying material. Ensure that the membrane is at least 4 ft (1.2 m) wide, with seam strengths at least 95 percent of the membrane strength.

##### **C. Protection**

During construction, protect the membrane from damage at all times. Remove and replace sections damaged by sunlight, heat, sharp objects, or any other source, at no cost to the Department.

**307.3.06 Quality Acceptance**

General Provisions 101 through 150.

**307.3.07 Contractor Warranty and Maintenance**

General Provisions 101 through 150.

**307.4 Measurement**

Impermeable membrane for subgrades, basins, ditches, and canals is measured by the number of square yards (meters) of subgrade, basins, ditches, and canals.

**307.4.01 Limits**

Extra, overlapping material required to produce a uniform membrane is not measured.

**307.5 Payment**

Impermeable membrane for subgrades, basins, ditches, and canals will be paid for at the Contract Unit Price per square yard (meter). This payment will be full compensation for preparing the surfaces, furnishing the membrane system materials, and applying the membrane system.

Payment will be made under:

Item No. 307	Impermeable membrane for subgrades, basins, ditches, and canals	Per square yard (meter)
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**307.5.01 Adjustments**

General Provisions 101 through 150.

## **Section 310—Graded Aggregate Construction**

**310.1 General Description**

This work includes constructing a base, subbase or shoulder course composed of mineral aggregates. Construct according to these Specifications and to the lines, grades, thickness, and typical cross-sections shown on the Plans or established by the Engineer.

The provisions of Section 300 apply to this work.

**310.1.01 Definitions**

General Provisions 101 through 150.

**310.1.02 Related References****A. Standard Specifications**

Section 105—Control of Work

Section 300—General Specifications for Base and Subbase Courses

Section 412—Bituminous Prime

Section 815—Graded Aggregate

Section 821—Cutback Asphalt

Section 823—Cutback Asphalt Emulsion

**B. Referenced Documents**

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GDT 21

GDT 59